

ABSTRACT OF THE DISCLOSURE

A method of providing a diversity of call services in a CDMA-2000 mobile communication system supporting a packet-based call service. The method provides a user with such a packet call service via an Internet Protocol (IP) based network and includes the steps of constructing a set of service primitive information including radio channel assignment information in accordance with at least one service class for the packet call service, determining a service primitive combination according to the service class of the packet call based on the service primitive information, assigning to the mobile terminal a radio channel corresponding to the service primitive combination, if a packet call for at least one mobile terminal is generated, and then providing the mobile terminal with the requested packet call service by using the assigned radio channel.